



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/591,566

09/01/2006

Dwight Eric Kinzer

KIN-010

6230

7590  
Dwight Eric Kinzer  
413 29th Avenue N  
Fargo, ND 58102-1508

06/30/2010

EXAMINER

VAN, QUANG T

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

06/30/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,566	<b>Applicant(s)</b> KINZER, DWIGHT ERIC	
	<b>Examiner</b> Quang T. Van	<b>Art Unit</b> 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flugstad et al (US 2002/0047009) previously cited by applicant, in view of Rowland et al (US 4,135,579) previously cited. Flugstad discloses variable frequency automated capacitive radio frequency (RF) dielectric heating system having a medium being soil (par. 0003, line 12), the apparatus comprising maintain a source of an alternating current radio frequency signal at a radio frequency not greater than 300 MHz, said source being connected to a pair of electrodes on opposite sides of a product treatment zone to cause an radio frequency signal to generate an alternating current electric field in said medium residing within said product treatment zone; a frequency controller to adjust said frequency of said radio frequency signal between different said radio frequencies; a mathematical model that predicts impedance of said medium as a function of temperature; an impedance sensor to sense impedance data of said medium; and a computer programmed to receive said impedance data from said impedance sensor, to process said impedance data using said mathematical model for said medium, and to apply a control signal to said frequency controller to adjust said frequency of said radio frequency signal to match said sensed impedance to a predetermined impedance (pages 23-24, claims 47-73). However, Flugstad does not

Art Unit: 3742

disclose the heating medium comprising hydrocarbonaceous material selected from the group consisting of oil shale, tar sand, oil sand, coal, bitumen, and/or kerogen.

Rowland discloses a heating medium comprising hydrocarbonaceous material selected from the group consisting of oil shale, tar sand, oil sand, coal, bitumen, and/or kerogen (col. 1, lines 10-33). Rowland also discloses a pump for extracting said heated

hydrocarbonaceous medium above said subterranean environment (col. 2, lines 44-52).

It would have been obvious to one ordinary skill in the art at the time the invention was made to utilize in Flugstad a heating medium comprising hydrocarbonaceous material selected from the group consisting of oil shale, tar sand, oil sand, coal, bitumen, and/or kerogen as taught by Rowland in order to low viscosity of the oil for easy flow. With

regard to " an impedance sensor residing in said subterranean product treatment zone." recited in claim 1, 12, 18, 23, and 32. Flugstad discloses only variable

frequency automated capacitive radio frequency (RF) dielectric heating system having a medium being soil (par. 0003, line 12) and impedance sensor to sense impedance data

of said medium. Rowland discloses a heating medium comprising hydrocarbonaceous

material selected from the group consisting of oil shale, tar sand, oil sand, coal,

bitumen, and/or kerogen (col. 1, lines 10-33). The combination of Flugstad and Rowland

that makes impedance sensor of Flugstad residing in subterranean product treatment

zone of Rowland. Therefore, " an impedance sensor residing in said subterranean

product treatment zone." meets the claimed limitation by the combination of Flugstad

and Rowland. Further, the examiner recognizes that references cannot be arbitrarily

combined and that there must be some reason why one skilled in the art would be

Art Unit: 3742

motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971).

References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 5:00Pm M-F.

Art Unit: 3742

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang T Van/  
Primary Examiner, Art Unit 3742  
June 25, 2010

Quang T Van  
Primary Examiner  
Art Unit 3742